ABSTRACT OF THE INVENTION

A technique is disclosed for scheduling data parcels from at least one client process to be output for transmission over a first communication line having an associated first bit rate. The at least one client process may include a plurality of client processes, each having a respective, associated bit rate. A plurality of data parcels associated with the client processes are identified by a scheduler. The scheduler performs scheduling operations and selects specific client data parcels to be included in an output stream provided to physical layer logic for transmission over the first communication line. An appropriate ratio of "filler" data parcels to be inserted into the output stream is determined. The "filler" data parcels correspond to disposable data parcels which do not include meaningful data. The output stream generated by the scheduler may include a uniform pattern of client data parcels (e.g. data parcels originating from the client processes) and "filler" data parcels. Additionally, according to specific embodiments, the scheduler is devoid of an internal clock source, and may perform scheduling operations based upon ratios of client and "filler" data parcels, rather than on an internal time base or reference signal.